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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,894	01/22/2004	Igor Shedletsky	5456	5456

20411 7590 07/11/2006

THE BOC GROUP, INC.  
575 MOUNTAIN AVENUE  
MURRAY HILL, NJ 07974-2064

EXAMINER
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JIANG, CHEN WEN

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/762,894

Applicant(s)

SHEDLETSKY ET AL.

Examiner

Chen-Wen Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-39 is/are allowed.
- 6) ☒ Claim(s) 20-28 is/are rejected.
- 7) ☒ Claim(s) 29 and 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20040122</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20,21 and 23-28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Koaizawa et al. (U.S. Patent Number 5,897,682).

Koaizawa et al. disclose an apparatus for cooling an optical fiber to be coated. In regard to claim 20, referring to Figs.1,2,3 and 6, the recovering and recycling of a coolant gas portion comprises a cooling assembly 4 and He gas purifying and circulating means 10. The cooling assembly 4 and analyzer sections 40,41 are in operational association. He gas was sucked out of a gas outlet 4a of the cooling assembly 4 by a compressor 22 and deliver portion of the He to the analyzers 40,41 and other portion to the MFC 35 blended with the pure He gas at the joint 39 and then back to the cooling assembly 4.

In regard to claim 21, a compressor 22 is operated within the apparatus.

In regard to claims 23 and 24, the apparatus comprises MFC 35,36 with associated control valves.

In regard to claims 25 and 26, the contaminants of the virgin gas are user's choice.

In regard to claims 27 and 28, the system comprises oxygen concentration measurement 40 and moisture measurement 41.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koaizawa et al. (U.S. Patent Number 5,897,682) in view of Schulte (U.S. Patent Number 5,377,491).

Koaizawa et al. disclose the invention substantially as claimed. However, Koaizawa et al. do not disclose orifice in the coolant gas recovery section. Schulte discloses valves, orifices, sintered filter or narrow pipes in the recovery section in the same field of endeavor for controlling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Koaizawa et al. with an orifice in view of Schulte so as to control the coolant flow.

***Allowable Subject Matter***

5. Claims 31-39 are allowed.

6. Claims 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for allowance: Claim 31 has been allowed because prior art of record fails to disclose or suggest coolant gas recovery system comprising, in combination, a first mass flow controller operable to reclaim a portion of the recovered coolant gas by delivering the reclaimed portion of the recovered coolant gas to a

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mixing point; a second mass flow controller operable to provide a virgin coolant gas to the mixing point and a third mass flow controller operable to maintain a flow of the recovered coolant gas through the apparatus to control the contaminant concentration. Claim 38 has been allowed because prior art of record fails to disclose or suggest coolant gas recovery system comprising, in combination, a first mass flow controller and a second mass flow controller for controlling the impurity concentration in the coolant gas based on the monitored impurity concentration, and a third mass flow controller for providing a seal to the heat exchanger using the coolant gas and for maintaining a constant flow of the coolant gas to ensure continuous operation of the pump.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chen-Wen Jiang  
Primary Examiner

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke, positioned to the right of the name and title.